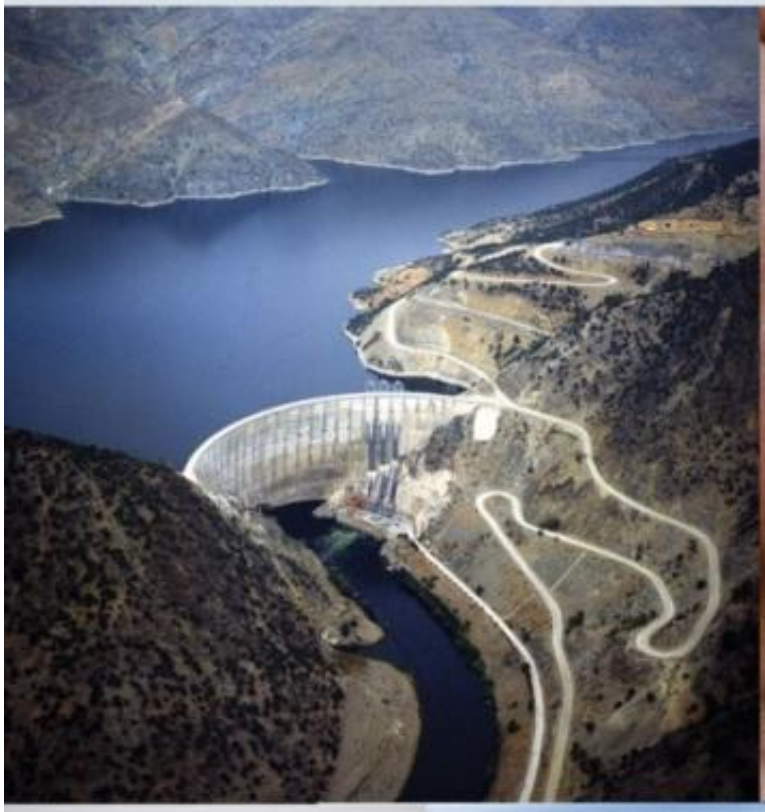


ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

Events-News-Politics-Projects-Environment-ClimateChange-Neighbourhoods-Cooperation-Disputes-Scarcity and more





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ORSAM WATER BULLETIN
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Mithat Paşa Caddesi 46/4 Kızılay-Ankara TURKEY
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❖ Libya Eager to Purchase Manavgat Water

Originating from Western Taurus Mountains in Turkey, Manavgat River flows into Mediterranean Sea after following about 90 km distance to south. The annual average flow rate of the river, where Oymapınar and Manavgat dams are located, is 3,6 billion cubic meters. (1)

The Manavgat River Water Supply Project was firstly considered as a solution to the water shortage in TRNC, and then it started to be considered as a solution for the Mediterranean countries going through water shortages such as; Israel, Jordan, and Palestine. Launched in 1992, this project was completed in 1999.

180 million cubic meters fresh water and 90 million cubic meters treated water per year will be transferred from Manavgat River, whose maximum flow rate is 500 cubic meters per second, and whose minimum flow rate is 36 cubic meters per second. The facilities of this project are located in 80 km east of Antalya. The project of selling Manavgat water to Israel for 20 years remained on agenda for a long time, and senior officials from both countries had talk on this issue. (2) In 2006, Israel having advanced technologies on desalination gave up this project, which involves transferring water through tankers; as the cost of water per cubic meter to be transferred through tankers was over a dollar, despite the fact that the cost of treated sea water per cubic meter was about half-a-dollar. Within this process the facility, whose total land and sea structures were completed, remained idle; and the facilities were transferred to Antalya Metropolitan Municipality in 2008, with the Decree of the Council of Ministers. (3)

On November 2nd 2011, the Leader of National Transitional Council of Libya's new government Mustafa Abduljelil's desire for Manavgat water and the fact that they are willing to purchase Manavgat water from Turkey took place on press. Stating that work to build a drinking water treatment facility and to extend it towards the coast through two pipe lines was launched, and that main loading storages were constructed on the coast, the Minister of Environment and Forest, Veysel Eroğlu also indicated that 150 millon dollars were spent for this project. He added that the transportation costs of Manavgat water are over 1,5 dollars. Stating their desire for Manavgat water, Libya indicated they would also undertake the transportation costs of the water. (4)

Sources

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2 Mithat Rende, Water Transfer from Turkey to Water-Stressed Countries in the Middle East, Water Resources in The Middle East, Hillel Shuval, Hassan Dweik (Ed.), 2007,s.167

3. Dursun Yıldız, Libya Manavgat Suyunu 2009'da da İstemişti. 26 Kasım 2009, www.topraksuenerji.org

4. http://ekonomi.milliyet.com.tr/manavgat-suyu-libya-ya-satiliyor/ekonomi/ekonomidetay/02.11.2011/1458398/default.htm

"Libya Eager to Purchase Manavgat Water", Tuğba Evrim Maden, ORSAM, 04/11/2011, online at: http://www.orsam.org.tr/en/WaterResources/showAnalysisAgenda.aspx?ID=895

BACK TO TOP

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❖ Turkey to sell Manavgat water to Libya

Veysel Eroglu said Libya was eager to purchase Manavgat Brook water, and Turkey had completed necessary preparations.

Turkey's forestry and water works minister said on Wednesday that Turkey would sell Manavgat water to Libya.

Veysel Eroglu said Libya was eager to purchase Manavgat Brook water, and Turkey had completed necessary preparations.

"We can deliver Manavgat water at any time," Eroglu told AA correspondent in an exclusive interview.

Eroglu said Libya's National Transitional Council (NTC) had contacted Turkey and the two countries had reached a preliminary compromise.

Veysel Eroglu said Libya would undertake transportation costs.

Turkey and Israel had reached an agreement on Manavgat water in 2001 after long years of negotiations. Within the framework of the agreement signed by Zeki Cakan, then energy and natural resources minister of Turkey, Turkey agreed to sale 50 million cubic meters of water to Israel p.a. for 20 years.

Turkey suspended sale of Manavgat water to Israel due to its tense relations with Israel.

"Turkey to sell Manavgat water to Libya", 02/11,2011, online at:
http://www.worldbulletin.net/?aType=haber&ArticleID=81124

BACK TO TOP

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❖ Nujaifi to visit Turkey

Erbil, Nov. 5 (AKnews) - Iraq's Parliament Speaker Osama Nujaifi is expected to visit Turkey next week to discuss border and water issues with the Turkish authorities, Deputy Parliament Speaker Aref Tayfour said Saturday.

Iraq, suffering from a two-year drought and allegedly one of the most wasteful of water due to old irrigation mechanisms, repeatedly accuses Turkey of withholding water from the rivers Euphrates and Tigris that have their origin in Turkey and provide 60 and 40 percent respectively of Iraq's water supply.

Also, the current crisis at the Turkish-Iraqi border will likely be a topic during Nujaifi's visit to Turkey. Turkey has been bombarding villages on Iraqi territory near the border for months and started a brief incursion after guerrilla fighters of the Kurdistan Workers Party PKK killed 24 Turkish soldiers during an attack on military outposts in October.

"Nujaifi to visit Turkey", Fryad Mohammed, Ak News, 05/11/2011, online at:
http://www.aknews.com/en/aknews/4/271229/

BACK TO TOP

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❖ Vegetable import ban- Iraq

Baghdad, Nov. 5 (AKnews) - Importing vegetables of any kind has been banned the Iraqi Agriculture Ministry announced Saturday. The ministry has stopped granting import licenses to all Iraqi merchants.

This comes after a five month vegetable import ban affecting the Kurdistan Region was lifted in September, as reported by AKnews.

However the Iraqi Cabinet decided Tuesday to prevent the import of all agricultural crops, vegetables and fruits to encourage domestic production.

Since the US invasion the Iraqi market has depended on vegetables from Turkey, Iran and Syria. Before the 2003 war Iraq depended on local vegetable crops.

The Higher Agricultural Commission, associated with the Ministers Council, is developing a plan to implement several agricultural projects within the 2011 budget to reach vegetable self-sufficiency.

The Undersecretary for Technical Affairs Mahdi Damad said: "The Ministry of Agriculture stopped granting licenses to import vegetables from outside the country in line with the government decision, which aims to support the Iraqi farmer."

"The Ministry of Agriculture, through its meetings with the Economic Commission of the Ministers Council, will determine what vegetables and fruits will be imported according to reports based on monitoring local products."

The Iraqi government has allocated funds to address the agricultural sector and drought, and the Higher Committee for Agricultural Initiative developed several mechanisms to improve the agricultural situation including irrigation water, agricultural land, plant production, animal production, and agricultural loans.

"Vegetable import ban", Haider Ibrahim, Ak News, 05/11/2011, online at: http://www.aknews.com/en/aknews/2/271122/

BACK TO TOP

❖ BAUER AG : BAUER Group expecting major contract to remediate the Mosul Dam in Iraq

Ad-hoc release BAUER Group expecting major contract to remediate the Mosul Dam in Iraq

Ad-hoc release in accordance with section 15 of the German Securities Trading Act (WpHG)

Schrobenhausen, November 3, 2011- On November 3, 2011, an affiliated company of BAUER AG (ISIN: DE005168108) signed a Letter of Understanding with the Ministry of Water Resources of Iraq in connection with the visit of Philipp Rösler, Germany's Federal Minister of Trade and Industry, to Baghdad. This document announces that the BAUER Group will be awarded the contract for the Mosul Dam remediation project, subject to further contractual details being agreed. The contract could be finalized within the next few months. With a total contract value equivalent to EUR 1.9 billion, and a scheduled execution period of around six years, the technically challenging project would be the largest yet undertaken in the history of the BAUER Group.

The Mosul Dam on the River Tigris is in need of remediation. It is located in the north of Iraq, approximately 70 kilometres from the Turkish border, and is the country's largest dam.

"BAUER AG : BAUER Group expecting major contract to remediate the Mosul Dam in Iraq", 03/11/2011, online at: http://www.4-traders.com/BAUER-AG-473347/news/BAUER-AG-BAUER-Group-expecting-major-contract-to-remediate-the-Mosul-Dam-in-Iraq-13873710/

BACK TO TOP

❖ Germany's Bauer in 1.9 bln eur dam project in Iraq

Nov 3 (Reuters) - German construction and engineering company Bauer said it signed a letter of understanding on a 1.9 billion euro ($2.6 billion) contract, its biggest ever, to refurbish a dam in Iraq.

"We expect the contract to be ready for signing within the next few months, after some final details have been clarified," Bauer Chief Executive Thomas Bauer said in a statement on Thursday.

Iraq is slowly moving to rebuild its dilapidated infrastructure more than eight years after the U.S.-led invasion, and needs investment in virtually every sector.

The project, scheduled to take about six years to complete, will involve Bauer building a cut-off wall to seal the Mosul Dam in northern Iraq. The ground beneath the 3.6 kilometre-long dam has become increasingly water-permeable, Bauer said. ($1 = 0.725 Euros) (Reporting by Maria Sheahan; Editing by David Holmes)

"Germany's Bauer in 1.9 bln eur dam project in Iraq", 03/11/2011, online at:
http://www.reuters.com/article/2011/11/03/bauer-iraq-idUSL5E7M33DI20111103

BACK TO TOP

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❖ Seven billionth person has been born

Less than 100 years ago, Mzee Baikiao lived in a vast territory in the Meru region. There was plenty of food and his family lived blissfully. Water streamed through the land and the regular rainfall left the area green with vegetation as well as fruits.

The people and animals enjoyed nature's heavenly sustenance. Old Baikiao died after reaching the ripe age of 83 and his many children divided up his land among themselves. The land was still sufficient. Then, Baikiao's children had to subdivide their land among their many children.

Today, his surviving children, grand children, great grand children and great great-grandchildren could very easily fill up an entire division and would require a mini-census to know their exact number.

Unlike the time of their patriarch, the natural streams no longer flow in their land, which has been reduced to string-sized portions that are inadequate for growing even vegetables.

It is unto such history that the world welcomes its seven billionth member today. It is a remarkable milestone, indeed a wake-up call, that earth's residents must do something urgently to check this explosion — it is just a dozen years ago that we surpassed the six billion mark.

Hitting the seven billion mark in world population brings to the fore questions that analysts in different sectors have grappled with, both theoretically and practically for a while now. Will earth be able to hold its population, say, 40 years from now when it is estimated there will be over ten billion people?

In a United Nations Population Fund (UNFPA) report, State of World Population 2011, the organisation's executive director Babatunde Osotimehn says in the foreword; "The attainment of a stable population is a sine qua non (essential) for accelerated, planned economic growth and development."

Osotimehn says young people hold the key to the future, "with the potential to transform the global political landscape and to propel economies through their creativity and capacities for innovation."

Young people between the ages of ten and 24 account for 1.8 billion people.

Future leaders

For ages, young people have been reduced to 'future leaders' a clichÈ, as that future is elusive. But the question now as the world population spirals upwards is what kind of a future are these young people and children facing?

The report quotes Achim Steiner, executive director of the United Nations Environmental Programme (Unep): "The past two decades have witnessed remarkable but also sobering changes economically, socially and environmentally in many parts of the globe."

According to Dr Steiner, environmental change is translating into escalating social and economic impacts and scarcities, from climate change to the loss of bio-diversity, and from rising land degradation to increasing scarcity of freshwaters.

Already, the earth that boasts of over 70 per cent of it being under water is water-scarce. Towards the tail end of the 20th Century and spilling over into the 21st, the almost unanimous rumbling is that at some point there would be a problem.

In 1999, the State of the World Report indicated that the global economy could be grossly affected by lack of resources for the world to meet the demands of its growing population. With lack of resources, conflicts arise. The greatest of them all are increased conflicts over water.

A World Economic Forum report of last year suggests that the world will face a 40 per cent global water shortfall between forecast demand and available supply by 2030.

Closer home, most people will know of the push and pull that is already there between Egypt and other Nile Basin countries like Kenya, Uganda and Sudan over the utilisation of the waters of the Nile.

Many of these states feel deprived of the use of the Nile Basin waters with colonial agreements that heavily leaned towards Egypt. As the populations in these Eastern African countries grow, so do the demands for adequate food and fresh water. Even as Egypt dithers, populations upstream can only hold out for so long.

Some of the other areas floated as possible flash points for violence over water include the Middle East around the focal points of the Euphrates and Tigris rivers and, of course, the Israel-Jordan-Palestine axis.

Pupil population

With the population also comes the strain on national economies with the struggle to provide for its population with such things as education and health taking centre stage. For example, the free primary education introduced in Kenya eight years ago saw an explosion of pupils' population. Meeting their demand for education means more resources have to be diverted there at the expense of other areas such as infrastructure.

All is not lost, however, for most nations as the unequal world of today puts different pressures on different economies. "In some of the poorest countries, high fertility rates hamper development and perpetuate poverty, while in some of the richest countries, low fertility rates and too few people entering the job market are raising concerns," states the current report on state of world population.

Seven billionth person has been born, Ferdinand Mwongela, 30/10/2011, online at: http://www.standardmedia.co.ke/sports/InsidePage.php?id=2000045910&cid=4

BACK TO TOP

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❖ Feeding 7 billion and more

According to the United Nations, the world population will hit 7 billion today, a rise of two billion in a little over a quarter of a century.

The UN predicts that at its current pace, the world population will rise from 7 billion to 9 billion in the next 40 years and almost all of the increase will be in poor countries.

And this population explosion is occurring while millions of people go to bed hungry and more than a billion people do not have access to clean drinking water.

It is true that the green revolution has helped us to produce crops to feed such a large population and we should be thankful for this, but the use of fertilizers and pesticides, which have helped to produce more food, have also had a serious effect on the health of human beings and the environment.

Even if our planet could feed several billion more people, it would be unwise to think that the population explosion should not be brought under control.

Instead of making efforts to feed more people who have not been born yet, we must make efforts to raise the standard of living for the people who are alive now so they can live in dignity.

The global food crisis of 2007-2008 should have come as a serious wakeup call about rapid population growth in less developed countries. The rise in global food prices in recent years has pushed millions more into poverty.

Now, a very large percentage of people's income in many countries must be spent on food.

In April, World Bank President Robert Zoellick announced, "More poor people are suffering and more people could become poor because of high and volatile food prices."

Anxiety over food prices and the sorrowful scenes of malnourished children that we see broadcast on television and published by other media outlets make it clear that our planet is not a good place to live.

To feed the ever-increasing population, great pressure has been put on resources. Many rivers and lakes have dried up or are being dried up due to droughts and excessive use of their water to irrigate farmlands to produce crops. Even the ground water in some countries is disappearing or becoming contaminated.

Over the years, billions of hectares of forests have been destroyed to produce crops, which has greatly harmed the world's ecosystem. Urbanization and the construction of roads and factories have also consumed millions of hectares of farmland and forests.

How will it be possible to produce more food and to provide essential services to millions of more people who will be born in the future, or who are alive now but malnourished, without using more water, land, and energy?

And this is not all. The rapid rise in population and deforestation are partly responsible for climate change. According to new studies conducted by Spain's Universidad de Almeria, every person emits the equivalent of approximately two tons of carbon dioxide a year from the time food is produced to when the human body excretes it, representing more than 20 percent of total yearly emissions.

Obviously, there is no panacea for reducing birth rates, and certain other factors, such as education, the empowerment of women, cultural reforms, and efforts to establish gender equality, are also very important.

However, there will be a catastrophe if the world does not promptly address the population explosion.

In 2000, the United Nations set the goal of reducing global poverty by half by 2015. However, we will have to wait and see if the UN will be able to achieve this goal or even come close.

Unfortunately, the United Nations has been focusing more on effects rather than causes. As prevention is better than treatment, it would be much easier and less costly for the UN to focus more on reducing the birth rate in poor countries than to constantly prepare to send humanitarian assistance when a famine occurs.

For example, in Somalia, which has one of the highest birth rates in the world, only 1 percent of married women have access to modern contraception. Former Irish president Mary Robinson, who visited Somalia in July to draw global attention to the famine in the country, said, "One of the ways you open up a conversation is to ask how many children do you have. Not a single woman said less than six children."

The scarcity of natural resources, especially water, may even lead to wars between countries in the future. Currently, there is a dispute between Turkey, Syria, and Iraq over water sharing. Iraq and Syria want Turkey, where the sources of the Tigris and Euphrates are located, to increase the flow of water.

The role of poverty should not be underestimated in uprisings in Tunisia, Egypt, Yemen, and Syria. For example, in certain rich Arab countries, where the standard of living is higher, the people are less dissatisfied about their despotic leaders.

When Mohamed Bouazizi set himself on fire in Tunisia in December 2010, he did it because he could not feed his family after the police prevented him from selling fruits and vegetables on the street.

The food riots in 2008 in certain African, Asian, and South American countries that were sparked by high food prices were another stark reminder that bleak times may be just over the horizon.

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Unfortunately, poverty even exists in more developed countries. For example, according to the U.S. Census Bureau, 46.2 million people in the United States are living below the official poverty line. The anti-corporatism protests in the U.S. and European countries are indications that a considerable percentage of people in these countries are struggling due to the high cost of living.

It should not be considered an "extreme view" if the United Nations is urged to give warnings to poor countries to reduce birth rates. As history shows, hungry people will leave their villages, cities, and even countries in search of food.

That is why no country should believe it is immune from the consequences of poverty in Africa, Asia, and Latin America. Nowadays, migrants from poor African and Latin American countries are willing to face every danger to reach Europe or the United States.

Our decisions today will affect future generations. It is the basic right of children who are born into this world to have access to enough food and fresh water and to enjoy a decent standard of living. It would be inhumane if we allow more scenes of famine and malnourishment to occur due to negligence toward the high birth rate in certain parts of the world.

And it would be a great injustice to future generations if we leave behind a world with a degraded environment, natural resources and fish stocks depleted, forests destroyed, and rivers dried up and polluted.

So everyone should do their part to create a better world and to prevent a global famine, while there is still time.

"Feeding 7 billion and more", 30/10/2011, online at: http://www.tehrantimes.com/index.php/opinion/4089-feeding-7-billion-and-more

BACK TO TOP

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❖ Trevi-Finanziaria Industriale SpA : DISCLOSURE ABOUT MOSUL DAM

DISCLOSURE ABOUT MOSUL DAM

Cesena, 04th November 2011 - With reference to recently published news regarding a supposed "Letter of Understanding" on behalf of the Iraqi Ministry of Water Resources for the execution of the works regarding the Mosul dam in Iraq, with the current notice the TREVI Group considers necessary to point out that there is to this day no evidence of the described facts and / or acts legally relevant, regarding the international public tender.

"From the referred facts - states the Managing Director Gianluigi Trevisani - no legal and binding award on behalf of the Iraqi government bodies has yet been issued and announced; the negotiating process is to be considered still on due course and the final decision is under scrutiny of the designated Iraqi inter-ministerial body.

Should news regarding the above mentioned project be issued and confirmed officially by the Iraqi Government and after appropriate checks on the respect of the public tender procedures, the Company will acknowledge it in accordance with the respect of the confidentiality clauses of the tender documents. This is also in accordance with the company's policy to announce the awards of price sensitive contracts only when finalized.

The final awarding of the Mosul project, which still remains a significant opportunity, will not affect our growth perspectives in the various sectors and will not influence our growth in geographical areas and markets already described in our strategic profile. The capital increase related to the convertible bond issued in November 2006 does support this development path.

About TREVI GROUP:

Trevi Group is a worldwide leader in the field of soil engineering (special foundations, tunnel excavation, soil consolidation and the building and marketing of special rigs and equipment relevant to this engineering sector); the Group is also active in the drilling sector (oil, gas and water) both in the production of plant and the supply of services, and it also builds automated underground car parks. The Group was established in Cesena in 1957 and today has more than 30 branches and is present in over 80 countries. Its success is due to the vertical integration of the main divisions making up the Group: Trevi, the division that supplies special services in the field of soil engineering, Petreven, the oil drilling division of the Group, Soilmec, the division that produces and develops plant and machinery for soil engineering and Drillmec the division that produces and develops drilling rigs (oil, gas and water).

The parent company TREVI - Finanziaria Industriale Spa has been listed on the Milan stock exchange since July 1999. The key

financial figures for 2010 are: Total revenues of €952.9 million, EBITDA of €137.3 million (margin of 14.4%), EBIT of €84.3 million

(margin of 8.8%), and NET PROFIT of €46.4 million. More information can be found on the website: www.trevifin.com.

"Trevi-Finanziaria Industriale SpA : DISCLOSURE ABOUT MOSUL DAM", 4/11/2011, online at: http://www.4-traders.com/TREVI-FINANZIARIA-INDUSTR-70734/news/TREVI-FINANZIARIA-INDUSTRIALE-SPA-DISCLOSURE-ABOUT-MOSUL-DAM-13875311/

BACK TO TOP

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❖ Plans for Gold Mine Divide Bulgarians

The New York Times Tells About the Drama in Krumovgrad

The Standart first unraveled the scandal with the gold mine in Ada Tepe

The controversial issues of the gold mine near the southeastern town of Krumovgrad got across the Atlantic. The New York Times published yesterday on first page the feature "Plans for Gold Mine Divide Bulgarians" by free lance journalist Dimitar Kenarov.

The Standart daily has been watching closely the scandal for years and first unraveled the affair with the gold mine near Krumovgrad. Since April 2011 the daily has published a series of reports, opinions and analyses dedicated to the fears of the people from the Rhodopes and the arguments of Dundee Precious Metals mining company. Today we are publishing the feature from The New York Times, which took this matter across the ocean - in the Heart of the United States.

KRUMOVGRAD, BULGARIA - At the edge of Europe in southeastern Bulgaria, the fields of tobacco have been harvested. Flocks of sheep roam the grassy hills, herded by shepherds and their shaggy dogs. Far off, the muezzin calls the faithful to prayer.

Forty-five years of Communist dictatorship and 20 more of a rush to recreate a market economy have had little effect here, where ethnic Turks and Pomaks form a majority in a community of quiet dignity, a remnant of the Ottoman Empire. The workdays begin at sunrise and end at sundown; poverty is a daily companion, wrapped in the smoke of hand-rolled cigarettes and chatter in Turkish. But change is coming, and many here think it will not be for the better. Spurred by the rising worldwide demand for gold, a Canadian mining company, Dundee Precious Metals, and its Bulgarian subsidiary, Balkan Mineral & Mining, have made plans to open a big open-pit gold mine near this town, which is close to the Greek border and a four-hour drive southeast of the capital, Sofia. The project has been mired in social and environmental controversy from the beginning, but this year the Bulgarian government provisionally granted the company a go-ahead, overriding the fierce opposition of the community.

"The mine will destroy our livelihood," Ahmed Ahmed, a 64-year-old shepherd from the village of Dazhdovnik, said as his flock grazed near the site of the proposed mine.
His neighbor Shukria Mehmed concurred. "We just don't need the mine," she said, her clothes and hands soiled brown from picking tobacco. "We already have all that we need."
The proposed mining site, atop a prominent hill, Ada Tepe, lies just outside Krumovgrad, a town of about 6,000 people. It is close to more than a dozen other settlements with adjoining agricultural fields and pastures, some no more than a stone's throw from the area expected to become the open pit.

Balkan Mineral & Mining has repeatedly assured local residents that there would be no serious adverse effects to their health and the regional environment. And the central government is convinced that the mine would bring much-needed wealth to the area and the country as a whole. But most of the people here remain unconvinced and openly hostile toward any large-scale mining. Unlike other areas in the Rhodope Mountains, which were heavily mined and industrialized under Communism and today bear the scars of environmental destruction, the landscape remains surprisingly pristine.

Much of the Krumovgrad region is in Natura 2000, the network of environmentally sensitive areas protected by the European Union. Of the 191 bird species in Bulgaria, 46 percent are found here, as well as half of the country's species of reptiles, amphibians and mammals. Small-scale tobacco farming has been a traditional occupation, with a high-end variety used in many of the major cigarette brands. Livestock grazing is also popular, as well as vegetable production, the cultivation of medicinal herbs and beekeeping. There is also a small shoe factory. Still, the region is far from thriving. The unemployment rate is officially around 13 percent, and tobacco production has sharply declined with the loss of government subsidies. Many families are barely managing to make ends meet.

The company says it can help reverse this predicament, promising 300 jobs in the construction phase and 230 jobs during the exploitation of the mine. In addition, it has pledged to create a municipal fund for infrastructure projects and an investment fund for supporting small and medium-size businesses.

"There are economic factors that cannot be ignored," said Alex Nestor, the top public affairs official at Dundee Precious Metals and deputy chairman of the Bulgarian Mining Chamber, an industry group. "A large investment like ours will raise the standard of living in the whole municipality and will turn the wheel. There must be a change of thinking; otherwise, the region will remain poor." "The arguments against us are weak," he added, based on emotion and irrational fears. There is more than emotion, however. Potential pollution of the limited water resources in the area is the principal cause for concern among residents. According to interviews with several farmers, the extensive drilling during exploration has dried up local wells or muddied the water. Danko Zhelev, the exploration manager of Balkan Mineral & Mining and the head geologist of the project, attributes this situation to the hot and exceedingly dry weather of recent years. The climate, with hot Mediterranean summers and mild winters, is indeed at the root of the quandary facing the region. The Krumovitsa River, which supplies a large portion of the water for drinking and irrigation in Krumovgrad, runs dry in the summer months, exposing its gravel bed. The mining project, which would produce gold concentrate through a process of crushing, grinding and flotation, calls for the use of large quantities of water that could further strain resources.

And the planned waste facility ? where as much as 14.6 million tons of waste rock and 7.2 million tons of tailings would be deposited over the expected nine-year life of the mine ? would be about 150 steps from the river.

"Our real treasure is not gold but water," said Usein Usein, 50, the proprietor of a popular coffee shop in Krumovgrad, where the proposed mine is a constant topic of discussion. "How am I going to look at my grandchildren when I know I've poisoned their lives?"
Even the few residents who support the project, hoping that it would provide an economic lift, have reservations.

"I think it would be nice to have a big employer in the region," said Plakan Mehmed, 38. "On the other hand, I don't trust that Bulgarian institutions could provide the necessary control."
Company and government experts at the Environment and Waters Ministry say no heavy metals would be released into the water system. Up to 98 percent of the water from the industrial process would be recycled, though some of the seepage would be discharged directly into the river, after solid particles are clarified.

But Gergana Chilingirova, an ecologist in Krumovgrad, points out that there are high levels of toxic arsenic in the ore. "There is a real danger that the drinking water of the region would be contaminated," she said.

The Krumovitsa River is part of the Maritza River Basin, which flows through Turkey and Greece and empties into the Aegean Sea, creating potential pollution in other countries.
Talks have been held about building a treatment plant for the water released into the river, but Balkan Mineral & Mining is reserving this only as a backup, in case the water quality deteriorates in the first year of mining.

"The fears that something would happen to the environment are unsubstantiated," said Asen Turdiev, deputy regional governor and a fervent supporter of the mining development. "A large number of experts have given a green light to the project, so I have no worries."
The mayor of Krumovgrad, Sebihan Mehmed, is distrustful of such assertions. Despite her interest in attracting outside investments that would improve life in the area, she argues that this project fails the test.

"I have demands not because I'm against the project as such - my father was a miner - but because we don't want vandalism," she said. "We don't want to be robbed of our clean environment and

resources. As the project stands, the damages to our region would be much greater than the benefits." Mrs. Mehmed, who has just won her third term as mayor with an overwhelming majority, has made detailed plans for creating an alternative economy for her town, based on environmental tourism, bioagriculture and meat processing, all of which she says would generate jobs. Whether that is realistic is hard to say: Her municipality is counting on structural funds from the European Union, and they could provide support for her vision.
All of that effort would be wasted, she said, if the mining project goes ahead. "Our town is not made to last 10 years," she said. "The company will finish its business and leave, but what will happen to us afterward? Nobody is telling us."
After an extensive series of public hearings in September, the High Ecological Expert Council recommended approval of the environmental impact assessment.
The Bulgarian environment and waters minister, Nona Karadzhova, has yet to endorse it - the environmental impact assessment was returned for second approval because of a minor technicality - but its passage is virtually assured.

"What is the point of holding public hearings, if nobody is hearing us?" asked Rami Azis, the mayor of Dazhdovnik. "Why should a private company and the government in Sofia decide the fate of the people who live in the Rhodope? Nobody is listening to us, and we'll be the ones who'll bear the brunt of all this.?

Some residents of Krumovgrad even make comparisons between the old Communist government and the current one. In the late 1980s, Bulgaria undertook a campaign, called the Revival Process, that sought to force all Bulgarian Turks and Pomaks to change their names and erase their cultural identities.

Yusuf Emurla, 70, who escaped from Bulgaria to Turkey during the campaign but comes back to his birthplace next to Ada Tepe every summer, sees the same political recklessness now.
"I grew up here, and every tree is dear to me," he said. "But I have no idea why the Bulgarian government so easily destroys its own country."

Plans for Gold Mine Divide Bulgarians, 02/11/2011, online at: http://paper.standartnews.com/en/article.php?d=2011-11-02&article=37595

BACK TO TOP

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❖ Usage limits, correct pricing seen to curtail demand

KUWAIT CITY, Oct 30: Kuwait Financial Centre "Markaz" recently published the executive summary of an updated version of their GCC infrastructure series covering: Power, Airports, Seaports, Roads & Railways, ICT and Water. In this installment, Markaz tackles the GCC Water industry in terms of demand, supply and investment trends. The Middle East is one of the most water-scarce regions in the world with its challenges being twofold. On one hand, natural water resources are close to zero, and on the other, water consumption in the GCC is one of the highest in the world.

Freshwater resources available in the region are lower than 1% of the total available global freshwater. However, the region is home to almost 6% of the world's population. Furthermore, its population growth is one of the highest in the world; growing at a 10-year CAGR of 3% (to 2010) whereas world population growth has fallen to 1.1% in 2011. The average daily water consumption per capita is 250 liters in Saudi Arabia. A similar situation exists in other GCC countries as well. In a recent study by Maplecroft, Bahrain, Qatar, Kuwait, and Saudi Arabia were rated as the world's most water-stressed countries, with the least available water per capita. Growing scarcity of groundwater in the GCC has resulted in water extraction exceeding the availability of natural renewable water resources.

High population growth is therefore making it a necessity for GCC governments to thrust momentum on faster execution of water projects. Thus, it comes as no surprise that the Project Technical Bureau (PTB) of Kuwait selected a power and water scheme as well as a wastewater treatment facility to be included in its first wave of projects. Investment is urgently needed to build new infrastructure. Water in the GCC is mainly produced from desalination. Even though this is a very costly process—as it requires higher amounts of energy to convert sea water into drinking water—compared with pumping water out of the ground, it is still the most practical solution for the GCC. The GCC already accounts for c.57% of world's total desalination capacity. Saudi Arabia, which operates 30 desalination plants and produces 24 million cubic meters of water per day, is the world's largest producer of desalinated water. Being an oil rich region, desalination projects are relatively less costly when compared with the rest of the world.

However, there is an urgent need for alternative and improved water management practices. To better manage this scarce and costly resource, countries are looking at new options. Some projects for wastewater treatment and recycling are planned. Kuwait showed the way in this area as far back as 2004, with its Sulaibiya wastewater treatment works. With a capacity of 425,000 cubic meters per day, it was at that time the largest wastewater treatment and reclamation project in the world. Clearly, the cost-effective means of tackling water scarcity is not desalination—it is demand management. Placing limits on water usage and correct pricing will curtail demand, or at least reduce wastage. The estimated production cost of water in the GCC is high at around US$2 per cubic meter

(it is usually around US$0.30 for non-desalination methods). A simple average of GCC pricing shows that consumers pay around 60% of this cost. It varies from 2% in Saudi Arabia to almost the full price in Dubai. Abu Dhabi charges a flat tariff regardless of the consumption levels.

Water tariffs in GCC countries per cubic meter (2010)
GCC Water Tariffs – Cost
to User (2010) USD
Oman 1.10-1.40
Qatar 1.20
Saudi Arabia 0.03
Bahrain 0.07-0.53
Kuwait 0.60
UAE (except Abu Dhabi) 1.80-2.40
Abu Dhabi (monthly
flat irrespective of usage 14.00
The use of recycled water and the reduction of leakages, which are considerable in some parts of the GCC because of the old network of water pipes, are the other challenges—or opportunities to prevent waste and improve supply—being looked into by GCC governments and water authorities.
The total quantum of investments in the water segment is estimated at US$35.6 billion between 2005 and 2014. This includes completed, semi-executed, and future projects. The bulk of this investment is split between completed projects and work-in-progress projects. Projects worth US$18.4 billion were either cancelled or deferred.

The ambitious GCC water grid project, costing US$4 billion with all six GCC governments as shareholders, was put on hold after its feasibility study in Q4 2010. The plan was to build a pan-GCC water network to enable the six states to trade potable water in both normal and emergency situations. It is understood that each government authority will implement their projects independently. The timeframe for revival has not yet been finalized.
In terms of geographies, the highest amounts of investments (current and future projects) are in Saudi Arabia at US$11.4 billion, followed by UAE at US$8.7 billion. Saudi Arabia has US$4.8 billion of investments in current projects and another US$6.7 billion in future projects, while UAE has US$5 billion in current projects and US$3.7 billion in future projects.

Demand and Supply
GCC governments have primarily focused on the supply side of producing water from either aquifers or desalination plants. Little emphasis is given to demand management. An absence of proper demand management and an almost nonexistent / loosely applied metering and pricing mechanism will have to be addressed in order to solve the region's water challenges.
Developing Ground Water
All GCC countries have a limited number of large, deep aquifers. Since the amount of groundwater

abstraction is far greater than the amount of recharge, aquifer levels have rapidly depleted, and the groundwater has increased in salinity. World Bank estimates that this water resource availability will shrink by one-half of its current size by 2030.
Currently, Saudi Arabia and Oman are the only countries with large renewable water resources. Freshwater resources in the GCC form 89% of the total water withdrawal. The rest comes from desalination and reusable wastewater. If Saudi Arabia is excluded, then freshwater resources account for 71% of the total withdrawal.

Desalination
Due to the deterioration of nonrenewable aquifers, the GCC increasingly relies on desalinated water as a main source for domestic water supply. Even though it is a costly process, desalination seems to be the only practical solution available for the GCC to get stable water supply. Governments turned to desalination in a big way to meet the growing demand for drinking water.
Huge investments have already been made in desalination plants. Saudi Arabia alone has spent US$25 billion in building and operating desalination plants. It is also estimated that the UAE spends about US$3.5 billion annually, desalinating water for its citizens.
Saudi Arabia is the largest producer of desalinated water in the world, accounting for 30% of global capacity. Due to the substantial amounts of investment (a plant producing 25 million gallons per day approximately costs US$100 million), there has been an increase in private sector participation in almost all countries in the GCC (to varying degrees). The private sector participation has been through the establishment of independent water and power project (IWPP) companies that combine power and water production.

Wastewater Treatment
Similar to desalination plants, GCC governments have invested heavily in wastewater treatment plants as well. Decision makers are yet to arrive at a consensus on how and where the treated wastewater should be used. Use of treated water in agriculture will be the foremost option for the majority of governments.

Use of Water
Except for Bahrain, where the general population uses the most water, agriculture is the largest consumer of water in other GCC countries. Saudi Arabia and Oman spend almost 90% of the available water for agricultural purposes.
Because of the region's extreme climatic conditions, massive amounts of water are needed for agriculture. On an average, the GCC countries use 70% of its water for agriculture, but derive only 1% of its GDP from agriculture. Thanks to the agricultural boom, subsidies, and food security argument of the governments, groundwater is fast depleting in most GCC countries. As demand increases, governments will be compelled to spend large amounts of money on water without recouping on their investments.
Saudi Arabia has realized that it is not worth the resources required to produce water for agriculture.

The government has reduced wheat purchases from local farmers by 12.5% a year in order to rely entirely on food imports by 2016.

"Usage limits, correct pricing seen to curtail demand", 05/11/2011, online at: http://www.arabtimesonline.com/NewsDetails/tabid/96/smid/414/ArticleID/175606/reftab/73/t/Usage-limits-correct-pricing-seen-to-curtail-demand/Default.aspx

BACK TO TOP

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❖ The Situation of the Groundwater in Arab Region

While the Arap region, where semi-arid and arid climate prevails, has 10 per cent of the dry zone across the world; the region's water quantity is less than 1 per cent of the total amount water on the earth. The 2/3 of the current renewable water resources in the region originates from outside the region, and they have the characteristics of transboundary waters. With the effect of the prevailing arid climate, 80 per cent of the region is composed of desert. The semi-arid temperate zones are seen in small places across the region. The annual precipitation rate ranges from 0 to 1800 mm; while the annual average rate of evapotranspiration is 2000 mm. (1)

In the forthcoming years, this problem will further increase in the region, which has been subject to problems related to water problem for many years. The intense use of surface waters in the region has caused to insufficiency of these waters in terms of quality and quantity. Therefore, the groundwaters have been used intensely for many years. The majority of the aquifers with broad distribution in the region is considered among the nonrenewable type of resource. In comparison with the other aquifers, external alimentation of these waters, which are entrapped within the earth as a result of the tectonic movements, is not possible. (2)

Especially used for agricultural purpose, the groundwaters are subject to intense use in the region. Because of excessive draft, most of the aquifers are under the threat of extinction. The water resources, which have been damaged in terms of quantity as a result of climate change, are also damaged in terms of quality. Nonrenewable groundwaters with large reservoirs are located in Libya, Tunisia, Egypt, Algeria, and Arabian peninsula; and generally, these waters do not have a sustainable use.

There are many aquifers in the region, and these aquifers are divided into main groups by evaluating their hydrogeological characteristics. The main aquifer systems are generally composed of sand and/or limestone. In addition to this, unconsolidated alluvium and volcanic sediments are common in the region. When considered in hydrological terms, the water transfer systems have fossil and nonrenewable structure with natural alimentation. The alimentation of renewable aquifers is can partially be provided, because of the limited amount of precipitation rates in the region. The main aquifers in the region are as follows; Eastern Mediterranean Carbonate Aquifer System, Jabal-al Arab Basaltic Aquifer System, Jezira Tertiary Limestone Aquifer System, Jezira Lower Fars - Upper Fars Aquifer System, Western Arabia Sandstone Aquifer System, Central Arabia Sandstone Aquifer System, Eastern Arabia Tertiary Limestone Aquifer System, and Nubian Sandstone Aquifer System (NSAS). (3)

While the contribution of the regional groundwater in meeting the current water demand is at the rate of 52 per cent; the amount of actively pumping water is 60 per cent. While the intense use of groundwaters negatively affects the sustainability of the limited resource, it also causes to socio-economic problems; especially in coastal aquifers, salt-water intrusion takes place. Excessive pumping leads to the mix pollutants into groundwater, and thus, this situation causes to quality problem. Institutional studies related to the use of groundwater are irregular and insufficient. Countries are insufficient in terms of groundwater management instruments and information. In addition to this, the popular participation and sensitivity is also weak.

In the region, where management and surveillance related to use of groundwater is weak; for instance, water table in the wells located in the eastern region of the United Arab Emirates declined to 150 meters depth in 1980's, and today this value is approximately 400 m. In Yemen, where water shortage prevails, drilling well is forbidden by law. According to estimations, 2500 wells have been sunk in aquifers. (4)

In the region, where the surface waters and precipitation rates are inadequate and where desertification is increasing every passing day, especially the nonrenewable groundwaters' uncontrolled usage without any future foresight creates concerns on the future water shortage of the region. In the region, where it is estimated that desalination and inter-basin water transfers will take place as an alternative, it is thought that these methods will not be sufficient either.

Sources

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4- http://www.isesco.org.ma/english/publications/water/Chap16.php

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BACK TO TOP

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❖ Henin launches Dead Sea protection bill in Knesset

Environment experts call bill 'step in the right direction'; aims to preserve sea, maintain salty waters, curb plunging water levels.

MK Dov Henin (Hadash) submitted a bill to the Knesset on Monday morning that outlines a plan for the future protection and rehabilitation of the Dead Sea.

Rooted in four main principles, the bill aims to preserve the Dead Sea and its internationally treasured natural resources, maintain the salty waters for the benefit of the next generation, curb the plunging water levels of the northern basin and determine new terms of management for the region, which will provide for continued reasonable extraction of minerals while protecting the ecosystems and biodiversity, according to the text.

Supporters of the proposed law in addition to Henin include MKs Moshe Gafni (United Torah Judaism), Amnon Cohen (Shas), Nitzan Horowitz (Meretz), Eitan Cabel (Labor), David Rotem (Yisrael Beiteinu), Orly Levy Abecassis (Yisrael Beiteinu), Zvulun Orlev (Habayit Hayehudi), Zahava Gal-On (Meretz), Orit Zuaretz (Kadima), Ibrahim Sarsour (United Arab List - Ta'al) and Uri Maklev (United Torah Judaism).

"If we don't protect the Dead Sea from menacing damage inflicted upon it daily, we will be responsible for the disappearance of this natural wonder," Henin said in a statement.

Within a year from the day the law is enacted, the environmental protection minister, in consultation with his administration, would be responsible for preparing a plan for the restoration of water in the northern basin of the Dead Sea, according to the bill. This plan would need to include a minimum increase of 235 million cubic meters beyond the current allocation of water that flows from the southern Jordan River into the Dead Sea.

Meanwhile, the minister would be able to approve water evaporations for mineral extractions only after receiving proof from the operator that no other technologies exist for the respective mining, and that that operator would be responsible for the restoration of any water eliminated in the process.

Also according the bill, the minister would also be charged with appointing a "Council for Regional Cooperation in Protection and Rehabilitation of the Dead Sea," which would work with international bodies and neighboring states. Additionally, each year the minister would need to produce a report detailing the amounts of minerals mined and quantities of water pumped in and out, as well as levies imposed upon those whose work has damaged the Dead Sea.

In the southern basin, where water levels are dangerously rising, a salt harvest will ensure that the maximum water level in the peripheral embankment and beach of Pool 5 remains at a maximum of 389.50 meters below sea level, while inside the pool, the level rises no higher than 390.50 meters, the bill continued.

Environmental experts called Henin's effort a "step in the right direction" and hoped that the government would enact the legislation.

"Until recently, the environmental community has had to respond to the ongoing deterioration in the conditions of the Dead Sea in a defensive mode," Dr. Alon Tal, head of Israel's Green Movement and professor at Ben-Gurion University's Jacob Blaustein Institute of Desert Research, told The Jerusalem Post on Monday afternoon.

"We count the annual drop in water levels and loss in ecological integrity, hoping for greater sensitivity by the government and the industrial powers that be at the Dead Sea works," continued Tal, who is currently a visiting associate professor at Stanford University in California.

"Taking the initiative on behalf of the public that owns this unique resource – as well as the future generations that are being deprived of their birthright – is a step in the right direction. It is hard to believe that this government will allow such a common-sense, responsible approach and allow meaningful legislative progress, but just as public pressure forced it to do 'the right thing' with natural gas rights, it is time to demand accountability at the Dead Sea as well."

Gidon Bromberg, Israel's director of Friends of the Earth Middle East, agreed that while Henin's move is positive, these measures should have been taken much earlier.

"The campaign for votes to include the Dead Sea in the new seven wonders should have been accompanied by a commitment from the Israeli government for urgent corrective actions," Bromberg told the Post.

"The demise of the Dead Sea is happening under state license, be it Jordan River diversion in the north or Dead Sea Works' concession in the south, which begs the question that the Tourism Ministry campaign is green-washing. The legislative effort by MK Dov Henin is a step in the right direction that should have come from the Tourism or Environment Ministries, rather than the opposition."

"Henin launches Dead Sea protection bill in Knesset", Sharon Udasin, 05/11/2011, online at: http://www.jpost.com/Sci-Tech/Article.aspx?id=243909

BACK TO TOP

❖ Greening the Desert

For centuries the Jordan Valley was renowned for being one of the most lush and productive lands in the world. But years of over-grazing and drought have left it arid and with high salinity levels.

To reverse this decline Australian permaculture expert Geoff Lawton has embarked on an ambitious project that he calls 'Greening the Desert'.

Using agricultural mulch and special irrigation canals, he is desalinating 3,000 square metres of land, restoring the soil's fertility and turning the Jordanian desert into an oasis. Lawton is also creating a demonstration site where he passes on his wisdom to people from as far afield as Afghanistan, Peru and Ghana.

video report

"Greening the Desert", Al Jazeera, 03/11/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3585

BACK TO TOP

❖ Israel reusing sewage sludge as fertilizer

Some experts contend that the sludge, which is used as fertilizer, presents health risks and say its use should be limited – or even stopped altogether.
By Zafrir Rinat

Following successful attempts to increase the use of purified waste water for irrigation, Israel has also started to reuse the remaining sewage sludge.

Some experts contend that the sludge, which is used as fertilizer, presents health risks and say its use should be limited – or even stopped altogether.

About half of the sludge produced in Israel is currently sent out to sea from a waste-treatment plant in the Tel Aviv area. Next week, however, the agency that runs that plant, the Dan Regional Association for Environmental Infrastructure (better known by its Hebrew name Igudan), will be dedicating a new facility that will enable sludge from the Tel Aviv area to be processed and used for agricultural purposes as well.

Ninety-four percent of the sludge that is not going out to sea is already being reprocessed and used as fertilizer, a new Environmental Protection Ministry report states.

Over the past year about 63,000 tons of sludge has been provided to three treatment plants where it has been processed into compost for agricultural use. The largest of the facilities is in the Jordan Valley.

Until about a decade ago, sludge, which is a byproduct of waste-water treatment, was sent to dump sites or to open areas where it presented an environmental hazard. Sludge can contain disease-causing bacteria in addition to poisonous metals and chemical residues that can disrupt the hormonal system of animals and humans. Because of the presence of these substances, there are experts who caution against the recycling of sludge.

The Environmental Protection Ministry said attention to the presence of hormonal substances in sludge is relatively new and no standards exist. With respect to the presence of poisonous metals, the ministry said the final processed product used in agriculture doesn't contain the metals in quantities that exceed standards.

Demand for the processed compost currently far exceeds supply, the ministry said, so the additional supply that will be produced from the new Tel Aviv area facility is also expected to find customers.

"Israel reusing sewage sludge as fertilizer ", Haaretz, 03/11/2011, online at:
http://mideastenvironment.apps01.yorku.ca/?p=3583

BACK TO TOP

❖ 'Grey water recycling could help address water crisis'

AMMAN – Water experts on Monday called for expanding grey water use in the Arab world, as it can help address the region's acute water shortage and improve the agriculture sector.

Experts and policy makers urged the private sector to invest in the treatment and reuse of grey water – non-industrial wastewater generated from domestic processes such as dishwashing, laundry and bathing – as an alternative source of water, highlighting that although Arab countries have made strides in wastewater reuse over the past two decades, the level of wastewater services still has room for improvement.

The experts made the remarks during the first day of a regional workshop on the reuse of grey water, which was organised by the Ministry of Water and Irrigation in cooperation with the Islamic Educational, Scientific and Cultural Organisation.

Water Authority of Jordan Secretary General Fayez Batayneh said the majority of discharged grey water can be recycled using individual treatment units within the homes that produce it, with no need to channel it to large treatment plants.

"Grey water can be easily treated and reused in households for irrigation and other purposes. Countries should consider grey water as a source of water that can bridge the gap between supply and demand," he noted during the workshop.

Batayneh underscored that 98 per cent of the population in Jordan has access to clean drinking water, while 70 per cent are connected to the sewage network, highlighting that due to water scarcity in Jordan, households receive water once during a certain period, which can be a week or a month depending on the area.

"The water deficit in Jordan, caused by limited water resources and dwindling rainfall, necessitates strategies that exploit all available sources and techniques," the secretary general said yesterday.

Concerns over dwindling groundwater reserves and overloaded or costly sewage treatment plants have generated interest in the reuse or recycling of grey water, also called "sullage", both domestically and for large-scale irrigation, according to web sources.

However, concerns over potential health and environmental risks mean that many municipalities require intensive treatment systems for legal reuse of grey water, making it expensive for both commercial and residential use.

Grey water differs from water from toilets, which is designated as sewage or black water to indicate it contains human waste. Grey water makes up 70-90 per cent of residential wastewater, according to web sources.

During the four-day workshop, experts from Jordan and other Arab countries will discuss raising public awareness on the treatment and reuse of grey water, the latest technologies for treating grey water and monitoring its safety, and the environmental benefits of treating grey water.

"Grey water recycling could help address water crisis", Hana Namrouqa, Jordan Times, 03/11/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3581

BACK TO TOP

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❖ Destroying our natural wonder

The Dead Sea certainly deserves to be considered one of the wonders of the world. But Israel and Jordan currently are unworthy candidates to care for it.
By Zafrir Rinat

A miracle has been taking place before our eyes. In less than 100 years, the people living around the Dead Sea have managed to dry up a significant portion of that body of water, turning its southern part into an industrial zone. Now they are trying to convince the rest of the world to recognize it as a "Wonder of Nature," without any guarantee or promise that it will be better protected in the future.

The Israeli tourism industry has been feverishly engaged in encouraging the general public to vote for the Dead Sea as one of the New Seven Wonders of Nature, as part of an international competition organized by a Swiss foundation. The prime minister and his cabinet were also enlisted in the effort, and a few months ago they took part in a festive voting ceremony near the hotels by the sea.

The Dead Sea certainly deserves to be considered one of the wonders of the world. It is an exceptional ecological phenomenon, and its cultural and historical heritage only add to its uniqueness. But Israel and Jordan currently are unworthy candidates to care for it.

The Dead Sea's level has been dropping by more than one meter per year, since its water sources began being diverted for human use. As a consequence, it is gradually retreating, leaving behind desolate areas and sinkholes, which put visitors at risk. Factories on both sides of the border have mining and quarrying operations across extensive swaths of nearby territory. In Israel the factories are seeking to expand and draw more water from the sea in order to exploit the minerals. If that were not enough, there is a plan to expand agriculture in the southern part, which would cause heavy damage to the Sodom salt flats, one of the region's characteristic landscape forms.

The two countries do not currently have a plan to preserve the sea, in balance with human needs. Israel recently prepared a master plan that establishes principles for preserving the region. It is not yet clear, however, to what extent it can reduce the effects of development and construction.

Another aspect related to administration rather than preservation is the fact that in the northern part of the Dead Sea, Israel is an occupying state. Israel entered the Dead Sea in the competition in cooperation with the PA and Jordan. In practice it administers the northern part of the sea, which is on the other side of the Green Line, without the Palestinians, who do not benefit from the sea's resources.

Declaring the region to be a world wonder based only on its glorious past would be meaningless. In order for the Dead Sea to be a wonder in the future as well, these countries and their residents surrounding it have to restrain their appetite for development and stop coveting additional coastal areas for construction of hotels and industrial pools. They have to formulate a long-term policy of sustainable development, which includes limiting the scope of development and taking advantage of any opportunity to rehabilitate the region.

Sustainable development will have to be administered equally, so a future Palestinian state can benefit from access to the Dead Sea's northern coast. Some will say that this is an End of Days vision, but it is the only vision that may be able to change the end of the sea.

"Destroying our natural wonder ", Haaretz, 03/11/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3564

BACK TO TOP

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❖ Green 2000 teaches Nigeria, Sudan agricultural techniques

An Israeli company is teaching African countries agricultural techniques and building greenhouses to increase food production.
Talkbacks ()

Alona Volinksy writes for No Camels.

An Israeli company is helping African countries become self-sufficient by teaching them agricultural techniques they say can significantly increase food production. Green 2000, the main importer of seeds and other agricultural materials in Israel, is building greenhouses, private and public farms and agricultural education centers across Africa.

"When we started the projects in Africa, we didn't give much thought to the social impact that it might have, but a few years later we built ourselves a vision that we try to follow in every new project," said Mark Fishman, an engineer in charge of Green 2000′s agricultural projects overseas. "Countries in Africa are very fertile but have very little agricultural knowledge. Therefore one of our goals is to raise the awareness for modern agricultural systems in those countries."

The company has set up programs in Nigeria, Chad, Angola, South Sudan, Kenya, Equatorial Guinea and Ghana. One of its primary goals is to to create agriculture-related employment in the rural provinces of African countries. "Development in rural provinces can prevent farmers from migrating to the cities, where usually it is hard to settle. Africa is a very rich continent with extremely poor people and we want to help change it by developing the rural areas," Fishman told NoCamels.

green200021 300×226 Green 2000 Teaches Agricultural Techniques To Nigeria, SudanAnother goal of Green 2000, Fishman said, is to stop Africa's dependence on foreign import, especially when it comes to basic food products. According to the company, this can be done by developing agricultural infrastructures.

The company created a model for an agronomic education center and two have already been established in Nigeria. In the centers, farmers can get agricultural equipment and guidance for their use. One of the centers even has a sample-farm, where farmers can train and improve their skills.

Each agricultural center established by Green 2000 can serve up to 7000 families, about 50,000 people, it said. According to Fishman, while the average farmer in Nigeria's Plateau State was growing about one ton and a half maize for one hectare of land, with new tools he can grow 4.5 tones. "With these tools, they can farm bigger areas."

Green 2000′s gets paid by African governments to set up these programs, Fishman explained. The governor of Plateau State turned to the company to help raise agricultural production in the area by spreading their knowledge.

In addition to its work in Africa, Green 2000 is also setting up project across Asia and South America.

Green 2000 teaches Nigeria, Sudan agricultural techniques,Alona Volinsky/ No Camels, Jerusalem Post, 30/10/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3554

BACK TO TOP

❖ Water Hackathon in Cairo and Tel Aviv

As the dust of revolution settles in Egypt, the country is beginning to face some of its other challenges. Chief among these is a scarcity of water. In fact, by 2017, demand is projected to outpace the country's supply.

At the American University in Cairo (AUC) last week, dozens of water and technology experts convened to discuss and create solutions for Egypt's water crisis. The Water Hackathon was organized by both the AUC Desert Development Center and the World Bank as a competition between 13 teams with prizes awarded to the best ICT solutions.

"We are looking for innovative ways to engage local communities in local issues," said Carlo Rossotto, Middle East and North African regional coordinator for the World Bank's GICT Policy Division. "The aim of this event is to bring young software developers from the skilled ICT sector, together with the water industry and with water experts."

Contestants were presented with nine different problems relating to Egypt's water problems including sanitation, flooding, drought, irrigation, equitable water distribution, and watershed management. Egypt's water situation is particularly challenging because its main source of freshwater, the Nile, is slowly drying up due with increased usage upstream and high levels of evaporation. The first place $15,000 prize was awarded, after two days of brainstorming, to a team that developed a water distribution project that involved collaboration between the Ministry of Agriculture, farms and the telecommunications sector.

In next-door Israel, concerns about water shortages have led to ocean water desalination efforts. The country began building the world's largest reverse osmosis desalination plant this January, the last of three such plants that together are expected to provide 44% of Israel's water by 2013.

"Water Hackathon in Cairo and Tel Aviv", Shifra Mincer, 31/10/2011, online at:
http://www.greenprophet.com/2011/10/water-hackathon-egypt/

BACK TO TOP

❖ UN: Water pollution, drought threaten world's poor

COPENHAGEN, Denmark (AP) — Prosperous countries have not lived up to their promises to help the poor, the U.N. declared Wednesday, saying poor people often go hungry because of polluted water, drought and other environmental factors that are increasing poverty.

In its annual report on the quality of life worldwide, the United Nations Development Program said more should be done to address international environmental concerns and that sustainability must become a way of life as the world population grows above 7 billion.

"The key finding of the report is that the very impressive long-term development progress that we have been able to document in low-income countries in recent decades may slow down or even be reversed unless we, as a world community, come to terms with these central environmental challenges, which include climate change but are not restricted to climate change," said William Orme, who oversees publication of the report.

The poorest countries, which tend to be tropical, arid and rural, are most vulnerable to extreme weather events including droughts and typhoons that impact crops, forest resources and fisheries, he told the U.N. launch of the report in New York.

Orme warned that "all these things will converge in a very negative way unless global action is taken."

UNDP Administrator Helen Clark said in the report's introduction that "sustainability is not exclusively or even primarily an environmental issue."

"It is fundamentally about how we choose to live our lives, with an awareness that everything we do has consequences for the seven billions of us here today, as well as for the billions more who will follow," she said.

The report noted that although aid to poorer countries grew 23 percent from 2005 to 2009, it was not enough.

"Rich countries have consistently failed to meet their stated pledges," including promises made by the G-8, the European Union and the United Nations to give $100 billion a year by 2020 to fight the impact of climate change in developing countries.

"The pledges fall well short of estimated needs, and disbursements fall well short of pledges. Most of the 'new and additional' funds pledged at the 2009 U.N. Climate Change Conference in Copenhagen have not been delivered, and less than 8 percent of pledges for climate change were disbursed in 2010," the report said.

Last month, the world population hit 7 billion. The U.N. estimates the world's population will reach 8 billion by 2025 and 10 billion by 2083.

The UNDP report, published annually since 1990, said high living standards don't need to be carbon-fueled and follow the examples of the richest countries, adding CO2 emissions have been closely linked with national income growth.

Among the 187 nations surveyed, Norway, Australia and the Netherlands topped the annual Human Development Index while Congo, Niger and Burundi were listed last.

The United States was fourth, ahead of New Zealand and Canada, but when the index is adjusted for internal inequalities in health, education and income, some of the wealthiest nations drop out of the UNDP's top 20, the report showed.

The U.S. falls to 23 on that list, South Korea drops from 15 to 32, and Israel — at 17 — falls to 25.

"UN: Water pollution, drought threaten world's poor", JAN M. OLSEN, Associated Press, 03/11/2011, online at: http://www.google.com/hostednews/ap/article/ALeqM5jpIroXxo3OO6AkSA6CYl0x9hgw-g?docId=dceffdf63f7741b8a4ba2959fe8ca1de

BACK TO TOP

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❖ China, Laos vow to enhance security cooperation on Mekong River

BEIJING, Oct. 30 (Xinhua) -- Chinese Defense Minister Liang Guanglie met in Beijing Sunday with Laotian Deputy Prime Minister and Minister of Defense Douangchay Phichit, saying that the two countries will enhance their cooperation in law enforcement and security on the Mekong River.

Two Chinese cargo ships, the "Hua Ping" and "Yu Xing 8", were attacked by armed people on the Mekong River on Oct. 5. Thirteen Chinese sailors were killed in the incident, in the "Golden Triangle" area where the borders of Myanmar, Thailand and Laos meet.

Liang expressed gratitude for Laos' support in helping stranded Chinese ships and crewmen return to China safely.

China, Laos, Myanmar and Thailand will hold a meeting in Beijing on Monday to discuss establishing a joint law enforcement and security mechanism between the four countries, in a bid to maintain order on the Mekong River.

"The meeting is very important," said Liang, adding he believed that, through the joint efforts of the four nations, the meeting would surely achieve positive results.

Liang said that bilateral military relations had yielded many satisfying outcomes in recent years. He hoped the two countries' armed forces can continue to lift their relations to a new level.

The armed forces of Laos and China share a deep traditional friendship, said Douangchay. He thanked China for its long-term support for his country and its army building.

He agreed that the Laotian government is willing to work with China to enhance law enforcement and security along the Mekong.

"China, Laos vow to enhance security cooperation on Mekong River", 30/11/2011, online at: http://news.xinhuanet.com/english2010/china/2011-10/30/c_131220606.htm

BACK TO TOP

❖ Despite Booming Economy, Brazilians Rally Against Amazonian Dam

No one in the developing world is against hydroelectric projects, which bring the benefits of power and development.

Except perhaps the locals.

Brazil's proposed Belo Monte Amazon dam is experiencing an "occupy" moment, with 100s of Xingu River basin indigenous peoples and riverine community members gathering to protest the facility's construction.

The 11,000 megawatt dam Belo Monte Dam is to be built in Altamira, in Para state in the heart of the Brazilian Amazon, and if built, will be the world's largest hydroelectric project.

The protesters have blocked the Trans-Amazon Highway (BR-230) around Sao Antonio village, where it passes through the dam's construction site. Local indigenous politician Juma Xipaia said, "Belo Monte will only succeed if we do nothing about it. We will not be silent. We will shout out loud and we will do it now. We only demand what our Constitution already ensures us: our rights. Many documents and meetings have already transpired and nothing has changed. The machinery continues to arrive to destroy our region."

Why Belo Monte, which has been planned since 1975? The facility won't come cheap, as construction costs are estimated at $16 billion and the transmission lines an additional $2.5 billion.

Brazil currently receives more than 80 percent of its electricity from hydroelectric dams, but given its booming economy, is expecting shortfalls to begin in roughly four years. Brazilian energy experts estimate that the Amazon's tributaries and rivers contain up to 70 percent of the country's untapped potential hydropower.

The proposed facility has become Brazil's biggest environmental hot potato, as since 2009 federal judges in Para have repeatedly ruled against the project, only to be consistently overruled by higher courts in the capital Brasilia. But for downstream Brazilians, 52 percent of the country supports Belo Monte, according to a poll earlier this year conducted by the Folha de Sao Paulo, Brazil's largest circulation newspaper.

Cue the Hollywood environmental lobby. Last year "Avatar" and "Titanic" film director James Cameron visited the Xingu River basin communities and was motivated to film a brief documentary, "Message from Pandora," castigating those naughty Brazilian officials supporting Belo Monte's construction. British rock star Sting and Avatar actress Sigourney weaver have also weighed in against the project.

The issue is percolating north of the border, as on 26 October the Brazilian government boycotted a closed hearing convened by the Inter-American Commission on Human Rights of the Organization of American States in Washington DC. Winning the PR war for the moment, Juruna indigenous people spokesman Sheyla Juruna told reporters, "The government's constant refusal to dialogue and its

undiplomatic posturing shows its negligence as it sidesteps the law and ignores the rights of local peoples. I am appalled by the way in which we are treated in our own land without even the right to be consulted on this horrific project."

Belo Monte raises many disquieting issues. On 25 October Brazilian Energy Minister Edison Lobao says it's the right of Brazil's government to decide if it wants the dam built.

Unlike many proposed hydroelectric projects, Belo Monte's environmental impact is limited to Brazil, as the waters to be harnessed are not trans-boundary rivers, unlike similar projects such as Tajikistan's Rogun, which would affect downstream nations Uzbekistan, Kazakhstan and Turkmenistan, or Turkey's massive GAP hydroelectric projects on the Tigris and Euphrates unsettling Syria and Iraq, or Ethiopia's proposed Give II and Millennium dams generating anxiety in the lower Nile's nine riverine states.

That said, Belo Monte is being constructed to meet future energy needs, not current shortfalls.

On 17 October a lawsuit filed in 2006 by the Para state's Federal Public Ministry reached the Federal Regional Court of the 1st Region in Brasília, which questioned the National Congress Act 788/2005 authorizing the construction of the dam without previously consulting the indigenous peoples of the municipality of Altamira and neighboring areas, alleging that this violated the indigenous peoples' constitutional under Article 231 of the country's constitution.

Belo Monte is, at the end of the day, a project designed to meet future national energy needs, far from Brazil's population centers, as evidenced by the multi-billion dollar construction costs for transmission lines. While the project is indeed indigenous, the potential bad publicity fallout is most assuredly not, and Brazil, ramping up to host the World Cup in three years time, hardly needs images of photogenic Indians being hustled off their land to support a massive energy project not required by the nation at the present time.

Time for Brasilia to listen to listen to the courts. Brazil's international image, already burnished to a high sheen by the presidency of Lula da Silva, would soar even higher – but if Brasilia's bureaucrats remain tone-deaf, then beware the wrath of Sting, the star of Alien and the director of both "Avatar" and "Titanic."

And Cameron's on good terms with the Terminator.

"Despite Booming Economy, Brazilians Rally Against Amazonian Dam", John C.K.Daly, 31/10/1977, online at: http://oilprice.com/Alternative-Energy/Hydroelectric-Energy/Despite-Booming-Economy-Brazilians-Rally-Against-Amazonian-Dam.html

BACK TO TOP

❖ Waterlogged Thailand will struggle to prevent future floods

Nov 3 (Reuters) - As waterlogged Thailand struggles to contain the worst floods in decades, it faces a simple truth: not a whole lot can be done to avoid a repeat disaster in the short term even with a new multi-billion dollar water-management policy.

City dwellers and farmers displaced since the floods began in July, killing 427 people, and foreign investors waiting to pump out factories could face the same thing when the rainy season rolls around again in the middle of next year.

But there are short-term steps to reduce the risk, including better cooperation between agencies with over-lapping responsibilities and an improvement in the management of dams that feed water down into the central flood plain.

At times since the crisis began unfolding, rivalry between different arms of government exacerbated by divided political loyalties has appeared to derail efforts to stop the deadliest flooding in half a century.

"A main weakness in the system is coordination and that can be improved if people set aside their egos. It has to be non-partisan," said Chaiyuth Sukhsri, head of faculty at the Water Resources Engineering Department at Chulalongkorn University.

"In the short term, we can eliminate a third of the problem but the rest is long term. Improving the infrastructure will take years."

The floods have knocked back Thailand's expected growth this year by a couple of percentage points and wiped out a quarter of the main rice crop in the world's biggest rice exporter, putting pressure on global prices.

The disaster has also forced up global prices of computer hard drives and disrupted global auto production after the flooding of industrial estates in the central provinces of Ayutthaya and Pathum Thani, north of Bangkok.

A 400 billion baht ($13 billion) budget deficit has been targeted for this fiscal year from Oct. 1, up from 350 billion baht previously, to help with the recovery.

Looking beyond this disaster and the still unknown cost of destruction, foreign investors would like to see more streamlined crisis management, said Nandor von der Luehe, chairman of the Joint Foreign Chambers of Commerce.

"Maybe the government should look at one agency. There were too many people responsible for different areas, like too many cooks in the kitchen," he said.

"That would be a big step."

"EVERYTHING BUILT ON FLOOD PLAIN"

The role that dams played in the disaster is being debated but some experts say authorities in charge of the dams scattered over uplands in the north were too slow to release water.

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When they had to, to stop dams bursting, unusually heavy monsoon rain was falling and the rivers were full.

"Bangkok has grown so much and everything is built on the flood plain. In the short term, not much can be done besides good management," said development economist Sawai Boonma, who has been studying Thailand's flood problem for decades.

"They have try to release the water gradually as it builds up in the dams. This time they waited until the dams were over-capacity. That's why the volume of water was so huge."

The priority of the authorities managing dams is irrigation and they were perhaps understandably reluctant to let a lot of water out early after a drought last year, said Chaiyuth.

In the longer term, Sawai said flood spill-ways, one kilometre (half a mile) wide should be created both to the east and west of Bangkok, with even a smaller one through the city.

People should also think about getting out of the flood plain, where the annual deluge brings such bounty in the fields, said Sawai. He envisages satellite towns built on higher ground linked to Bangkok by high-speed train.

A newer industrial zone southeast of Bangkok, which has no major river basin, has escaped the flooding.

"Not only have they put the industrial estates in the danger area, they've built over the best rice fields. It's lose-lose," Sawai said.

A newer industrial zone southeast of Bangkok, which has no major river basin, has escaped the flooding.

Climate change with its expected rise in sea levels and more storms only make a re-think more critical, he says.

Von der Luehe said Thailand was still good for business, despite the floods and the danger of more, because of factors such as location and infrastructure.

"Obviously, investors should consider locations. Not everything has been flooded," he said. "Overall, when we look at the neighbouring countries, Thailand is still a strong destination. We are in a good position here." (Additional reporting by Ploy Ten Kate; Editing by Nick Macfie)

“Waterlogged Thailand will struggle to prevent future floods”, 03/11/2011, online at: http://www.reuters.com/article/2011/11/03/thailand-floods-risk-idUSL4E7M30RU20111103

BACK TO TOP

❖ Thailand reports more than 500 dead in floods

More than 500 people now have died from flooding in Thailand, the unrelenting water flows are closing in on central Bangkok and Prime Minister Yingluck Shinawatra said the floods could take as long as three weeks to recede, weekend news reports say.

The floodwaters are contaminated by garbage, dead animals and industrial waste, which reports say threaten the 12 million people living in and around the city with disease.

The government reported Sunday that 506 people were dead, up 60 from Saturday. Authorities are trying to redirect the water around the city and out to sea, reports say.

The government has built a 3.7-mile (six-kilometer) wall of sandbags in northern Bangkok and installed more water pumps elsewhere, reports say.

Thailand has been hit with more than three months of intense rain. Last month, Bloomberg News reported, about 40% more rain than average filled dams north of Bangkok. That prompted authorities to release 9 billion cubic meters of water down a river basin with Bangkok at its southern end.

The deluge destroyed 15% of the country's rice crop and flooded homes with more than 10 million people living in them, Bloomberg reported. The floods also have hit industrial parks and thousands of factories, cutting off production at companies and leaving thousands of people without jobs.

Shinawatra said on Saturday that the government would allocate $3.3 billion for post-flood reconstruction, reports say.

Hindering rescue and evacuation efforts, Al-Jazeera reported on Friday, are crocodiles in the floodwaters. The reptiles, which escaped from farms in the country, thrive in warm and stagnant deep water and they have frightened and bitten city residents, the news service reported.

"Thailand reports more than 500 dead in floods", 06/11/2011, online at: http://www.marketwatch.com/story/thailand-reports-more-than-500-dead-in-floods-2011-11-06?link=MW_latest_news

BACK TO TOP

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❖ India's soft stance in troubled waters dispute

Prior to the partition of India, the five tributaries of the Indus River flowing through undivided India, were North India's lifeblood. Years after partition, in 1960, the Governments of India and Pakistan executed the Indus Water Treaty ("Treaty"), at the instance of the World Bank, to deal with the sharing of the resources for equitable distribution, and recourses for protection of the rights of the parties. Briefly, India had the exclusivity of the Eastern Rivers and Pakistan over the Western ones. The Treaty has survived three wars and other conflicts between the two nations.

The recent dispute relates to the Chenab river basin, where there are 15 hydro power projects at various stages of planning and operation. Among them is the Baglihar Dam, the construction of which had led to a dispute in 1999 on the issue of its design. A Neutral Expert was appointed by the World Bank to resolve the dispute, who in his final verdict upheld some minor objections raised by Pakistan, but most issues were resolved; Pakistan withdrew its objections and did not assail the verdict.

The Kishan Ganga River is a tributary of the Jhelum in the Baramulla district of Jammu & Kashmir. Pakistan's current objection is against India's proposed diversion of Kishan Ganga waters, alleging this to be a breach of India's obligations to Pakistan under the Treaty, thereby creating a water crisis for Pakistan. The matter was referred to arbitration, with Pakistan invoking the Settlement of Differences & Resolution Clause in the Treaty, by way of a Request alleging India's proposed diversion of the Kishan Ganga waters to another tributary, was a breach of India's obligation of non intervention in the waters of the Western rivers. The other issue raised subsequently is that the construction of the dam would deplete the reservoir level of the river below Dead Storage Plant.

The matter was referred to a Court of Arbitration ('Court') as provided under clause (ix) and (5) of the Treaty and the parties appointed their arbitrators, but were unable to agree on the umpires, who were appointed by the Secretary General of the United Nations. There was a site visit to the pertinent facilities in the location, the hydro projects and surrounding areas, pursuant to certain interim measures sought by Pakistan.

Briefly, Pakistan demanded cessation of further work on the project, a requirement for India to update Pakistan and the Court on any adverse developments, and be subjected to the principles of what is regarded under the International law principle of the Passage through Green Belt ("Green Belt"), i.e. provide an undertaking to the Court and Pakistan for restoration of the status quo ante, in case of significant adverse effect being determined in the final award.

The Green Belt case between Finland and Denmark (1991) concerned a road and rail traffic project. Challenged by Finland as it impeded passage of its drill ships and oil rigs, the case is a landmark in establishing the own risk principle for any State engaged in works which may violate the rights of another State. India was not willing to volunteer such an undertaking which would involve dismantling of the dam, as in India's assessment there was no imminent harm to Pakistan. Considerable submissions were exchanged on these issues, thus in the course of the hearing, Pakistan enlarged its claim from not to have the flow obstructed or diverted, to restraining the construction of the dam to meet the needs of the people in a different River Basin. India strongly contested the

assertion of any right of veto or prior consent being envisaged under the Treaty. On balance of convenience, India's Counsel argued forcefully on India's right to construct the Project being plausible, the measures requested by Pakistan could inflict irreparable damage to India.

Pakistan's arguments essentially portrayed itself as a victim, by references to 1948, and also the Baglihar dispute, and the deepening of the concerns arising from the site visit, even though there were no major hiccups for 63 years.

Yet at the close of hearing, India out of a sense of fairness or as a nation bound by the rule of law, agreed to be bound by the Green Belt case, conceded on non diversion of waters till 2015, in keeping the Tribunal and Pakistan intimated of any imminent developments, and assured unequivocal submission to the final outcome of the proceedings. Even then, the Tribunal has ordered the suspension of many key components of the construction activity, with temporary structures being permitted.

It is possible that the concessions were made as India is confident that the final award will be in its favour. Or to buy peace and settle with Pakistan as the final award will be communicated in the next year. Time is of the essence, especially as there are several stakeholders,domestic and foreign, whose investment and resources have been mobilised and therefore impacted by this position. Arbitration is expensive, and India has more to lose than Pakistan in the wait.

"India's soft stance in troubled waters dispute", Kumkum Sen, 07/11/2011, online at: http://www.business-standard.com/india/news/indias-soft-stance-in-troubled-waters-dispute/454700/

BACK TO TOP

❖ Scientist talks global water crisis

Population grew above 7 billion.

Of that 7 billion, 1 billion people go without water and 40 percent of the world has unclean water, said Peter Gleick, co-founder and president of Pacific Institute for Studies in Development, Environment and Security.

Many people believe having clean water is a human right. Gleick is one who believes strongly in having clean water, and he gave a speech Thursday, "New Thinking for Water in the 21st Century," for the first-ever UK Environmental and Sustainability Summit.

The environmental speaker series features nationally recognized scholars who will talk about global challenges regarding sustainability.

Gleick is a MacArthur winning scientist who specializes in the environment and an internationally recognized expert on water.

His speech focused on the fresh water crisis in the world. With proper changes, the water crisis can be fixed, he said.

However, during his speech Gleick implied these changes need to be made sooner rather than later.

"Current use of water is out of balance and unsustainable," he said.

Throughout the speech, Gleick explained how important water is to the human race. Not only do people need water to live and grow food, but water is also essential to making a variety of materials, such as steel.

He broke down the history of water usage into three eras of water.

The first era was during ancient times, when humans first began harnessing water. The second started around the 1800s and only recently ended. In this era, humans began polluting the water supply while they became more dependent on it.

Gleick is positive about the future of water. He said the third era of water has just begun. In this era, humanity has taken a more active role in the environment and attempts to be more conservative. Gleick believes that even with the threat of overpopulation, governments are attempting to do something about the crisis.

"In the United States we use less water today for everything than we did 30 years ago," he said.

Gleick was brought to UK via the Tracy Farmer Institute for Sustainability and the Environment, and the Environmental and Natural Resources Initiative. The event was also the second annual research showcase and for the 2011 UK Sustainability Awards.

"Scientist talks global water crisis", 03/11/2011, online at: http://kykernel.com/2011/11/03/scientist-speaks-about-clean-water/

BACK TO TOP

❖ Safeguarding South Asia's Water Security

In today's era of globalization, the line between critic and hypocrite is increasingly becoming blurred. Single out a problem in a region or country other than one's own, and risk triggering an immediate, yet understandable, response: Why criticize the problem here, when you face the same one back home?

Such a response is particularly justified in the context of water insecurity, a dilemma that afflicts scores of countries, including the author's United States. In the parched American West, New Mexico has only 10 years-worth of drinking water remaining, while Arizona already imports every drop. Less arid areas of the country are increasingly water-stressed as well. Rivers in South Carolina and Massachusetts, lakes in Florida and Georgia, and even the mighty Lake Superior (the world's largest fresh-water lake) are all running dry. According to the U.S. Environmental Protection Agency, if American water consumption habits continue unchecked, as many as 36 states will face water shortages within the next few years. Also notable is the fact that America's waterways are choked with pollution, and that nearly twenty million Americans may fall ill each year from contaminated water. Not to mention that more than thirty U.S. states are fighting with their neighbors over water.

Such a narrative is a familiar one, because it also applies to South Asia. However, in South Asia, the narrative is considerably more urgent. The region houses a quarter of the world's population, yet contains less than five percent of its annual renewable water resources. With the exception of Bhutan and Nepal, South Asia's per capita water availability falls below the world average. Annual water availability has plummeted by nearly 70 percent since 1950, and from around 21,000 cubic meters in the 1960s to approximately 8,000 in 2005. If such patterns continue, the region could face "widespread water scarcity" (that is, per capita water availability under 1,000 cubic meters) by 2025. Furthermore, the United Nations, based on a variety of measures – including ecological insecurity, water management problems and resource stress – characterizes two key water basins of South Asia (the Helmand and Indus) as "highly vulnerable."

These findings are not surprising, given that the region suffers from many drivers of water insecurity: high population growth, vulnerability to climate change, arid weather, agriculture dependent economies, and political tensions. This is not to say that South Asia is devoid of water security stabilizers; indeed, its various trans-national arrangements, to differing degrees, help the region manage its water constraints and tensions. This paper argues that such arrangements are vital, yet also incapable of safeguarding regional water security on their own. It asserts that more attention to demand-side water management within individual countries is as crucial for South Asian water security as are trans-national water mechanisms.

Safeguarding South Asia's Water Security ,Michael Kugelman, 04/11/2011, online at:
http://www.newsecuritybeat.org/2011/11/safeguarding-south-asias-water-security.html

BACK TO TOP